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## Abstract

Sulfonated aromatic polymers, membrane containing said polymers and a method  
5 for production and use of the same

A sulfonated aromatic polymer comprising the repeating structural unit of the  
formula I



in which  $\text{Ar}^1$  and  $\text{Ar}^2$  are, independently of one another, divalent aromatic or  
heteroaromatic radicals which are optionally substituted by one or more  
monovalent organic groups which are inert under the conditions of use, R is  
15 hydrogen, an alkali metal or alkaline earth metal ion or an ammonium ion, n is an  
integer from 0 to 3, m is 0, 1 or 2 and X is a  $-\text{CO}-$ ,  $-\text{O}-$ ,  $-\text{C}_p\text{H}_{2p}-$ ,  $-\text{C}_p\text{F}_{2p}-$  or  $-\text{S}-$   
group, in which p is an integer from 1 to 10, is described.

Membranes with high proton conductivities can be produced from this polymer and  
20 are preferably used in fuel cells.